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Costs and benefits of re-integration policies for detainees: an exploratory study

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SUMMARY

This paper explores the feasibility of a social cost-benefit analysis of Dutch reintegration policies for convicts. First, it develops a conceptual framework that contains the relevant costs and benefits as well as the intervention logic of these polices. Second, it uses the international literature to obtain estimates of the effects of the latter policies on the life course of former detainees after their release from prison. Directly after imprisonment they can be in different situations: employed, not employed with a benefit and not employed without a benefit. During their life course, transitions between these situations may occur. Furthermore, they may become imprisoned again. Hence, a life course is a series of subsequent periods of: (i) employment, (ii) out of employment and not imprisoned, with a benefit, (iii) out of employment and not imprisoned, without a benefit and (iv) imprisonment.

For individuals ending their imprisonment in the second half of 2011 or 2012, individual data is available about their monthly situation during their first year after imprisonment. Because prisoners in the Netherlands often participate in a reintegration program, we assume that the data apply to prisoners who have participated in reintegration. This data was used to estimate the transition probabilities between the different situations for the first year after their release. With the help of these transition probabilities, the life course of individuals involved is computed for another four years. Based on the international literature, we make estimates of the impact of re-integration policy on the transition probabilities. Then we can compute what the transition probabilities would have been without this policy. Using the latter probabilities, we then determine how the life course would have been without re-integration policy. By comparing the two life courses, we compute for a period of five years how many months convicts who have participated in reintegration activities are less in a benefit, more in a job and less in renewed detentions compared to convicts that have been deprived of reintegration activities. Using information about the level of a benefit, tax rates and detention costs, we can monetarise the changes in time spent in these situations. With the help of information about other judicial costs and the costs encountered by victims of crime, we also estimate the savings on these items induced by reduced recidivism. In view of the uncertainty about the effects, we take three scenarios into consideration: a no effect scenario, an intermediate effect scenario and a high effect scenario.

There is also considerable uncertainty about the costs of reintegration policy. Particularly lacking is data about the costs of municipal reintegration activities, which for the most part take place after detention. With respect to reintegration activities during detention, for which the central government is responsible, a lack of data is not so much the problem, but unclarity about which activities can be attributed to reintegration.

Given the uncertainties, hard conclusions cannot be drawn. Based on the outcomes we tend to think that costs and benefits of reintegration measures do not differ much. There is no doubt, however, that our analysis needs several improvements. At the end of the paper several suggestions for improvement are given.

INTRODUCTION[i]

This paper explores the possibilities for a social cost-benefit analysis of reintegration policies for detainees in the Netherlands. First it provides a conceptual framework for the costs-benefit analysis. Then it attempts to estimate several benefits by combining outcomes of the evaluation literature and data about the life course of former detainees after their release from imprisonment. Finally, it provides estimates of the policy costs. However, the information on which the estimates are based contains many gaps and uncertainties. At the end of the paper we present several recommendations on how these gaps and uncertainties can be removed or at least substantially reduced.

Our analysis only deals with adult prisoners. For young convicts, there is even less information available.[ii] The same is true for people who have committed crimes but are not or only partly considered accountable for their actions. Often, they must serve a prison sentence first and then receive mandatory treatment in special clinics.

The purpose of reintegration policy is that after release from prison, convicts adopt a normal life, find a job and do not fall back into their old habits. However, adopting such a lifestyle is not easy for many former convicts. Partly, this has to do with practical problems. If after release from prison a person does not have an income and a house, he will be tempted to seek help with his old friends, which would result in a renewed life of crime. Therefore, re-integration policy partly exists of practical help to ensure that former convicts have a home and an income. However, this is not enough as many convicts must deal with debts, psychiatric problems and addiction. Both during and after imprisonment interventions are needed to solve or at least reduce these problems.

If these measures increase the chance of employment and reduce recidivism, this could have substantial benefits for society in the form of savings on benefits and judicial costs as well as additional income tax revenues. Particularly, the savings on detention costs are potentially high.

However, reintegration policies are not by definition effective. And if there is an effect, the benefits generated may not be big enough to compensate for the policy costs. There may be several reasons why the desired effects do not occur or are not big enough. Let us look at the effect on employment chances. In the end employers decide whether they want to hire former convicts. Even when the employer does not know that he has to do with a former convict, certain characteristics of the latter may still withhold the employer from hiring him. The detention period is still visible as a period of non-participation in the labour market. Furthermore, many convicts lack the social and occupational skills that employers require. Although, reintegration policies try to improve the employability of convicts, it is uncertain whether this is enough to find employment. We know from the extensive evaluation literature on employment measures for unemployed and disabled people that the effects of these measures tend to be small (see the following international reviews: Card, Kluve and Weber, 2010; Kluve, 2010; De Koning and Peers, 2007). Recent evaluations of Dutch employment measures that make use of a randomised control group methodology also point to small effects (Bolhaar, Ketel and Van de Klaauw, 2014; De Koning et al (2018). The latter studies deal with municipal welfare to work programmes, which most municipalities also offer to former detainees when the latter claim a social assistance benefit. Their conclusions are in line with earlier evaluations of North American

welfare to work programs (see for a review of these studies Greenberg, Deitch & Hamilton (2009)). Although, this does not prove that effects are also small for former convicts, It is definitely a possibility one has to take seriously.

We realise that reintegration policy cannot be solely judged on financial returns. In the first place, it is not always easy to monetarise effects. Suppose, that reintegration reduces crime rates. Then more people in society may feel safe, which probably improves their well-being. It might be possible to ask people what this is worth to them in terms of money, but this information is not available. Another purely qualitative aspect is that our country (like many other countries) views a human treatment of detainees as a key feature of a civilised society. In the Netherlands a human treatment means that detainees obtain the opportunity to spend their time in prison as much as possible in a meaningful and healthy way. It means, for example, that they have access to work, care, education and sports. This is a right and does not depend on the effects of the latter activities on reintegration. However, it is still desirable that these and other activities do have positive effects on reintegration and that the benefits involved at least cover the costs. Therefore, estimating effects, costs and benefits of reintegration policy is important.

This paper does not contain a new impact assessment of reintegration measures, but uses existing studies to make plausible assumptions about the effects of these measures on the transition probabilities between the following situations: (1) employed, (2) not employed, not in detention and receiving a benefit, (3) in renewed detention and (4) in neither of these situations. We also have data about the life course of a group of former detainees covering the first year after prison, which allows us to compute the transition probabilities. As many detainees participate in reintegration activities, the latter transition probabilities are assumed to reflect the situation with reintegration. By correcting these probabilities for the effects of reintegration activities, we obtain transition probabilities that reflect the situation without reintegration, which make it possible to construct life courses for the latter situation. By comparing the life courses with and without participation in reintegration activities we compute the number of months former convicts have been longer in employment, shorter in a benefit and shorter in renewed detention. These effects are then monetarised to obtain social benefits.

At least some of the studies we have used to estimate the effects also deal with measures (like psychiatric help and help for addicts) aimed at improving the health of the convicts. This means that at least to some extent the benefits measured also reflect the effects of this type of intervention. However, we decided not to include the costs of Dutch health measures in our cost-benefit analysis. Health measures can help convicts to reintegrate in society and can thus be considered a part of reintegration policy. However, it is likely that at least partly, health measures are also implemented for humanitarian purposes. Therefore, it would not be right to attribute all its costs to reintegration. Furthermore, health measures may have other benefits that lie outside the realm of re-integration. Particularly if younger people are cured for a mental disorder or an addiction, it could bring about a substantial reduction in future health costs. In this respect it is important to note that in the Netherlands there is general access to health care. There is no information on which we could base estimates of future savings on health costs. Including costs of health measures, but excluding potentially important savings associated with these measures, would give an unbalanced picture.

Given the limitations of this study, the outcomes give at most a rough indication of the costs and benefits of reintegration activities for detainees. We see our analysis as a first step in the direction of a reliable societal cost-benefit analysis.

This paper is structured as follows. First, we pay attention to organisation and content of reintegration policy for detainees. Then we present a conceptual framework for the cost-benefit analysis. The next two sections present estimates of benefits and costs, respectively. The final section deals particularly with the question how we can get to a full-blown cost-benefit analysis.

ORGANISATION AND CONTENT OF REINTEGRATION POLICY FOR CONVICTS

Reintegration of convicts is a joint responsibility of the central government and the municipalities. Broadly speaking, the central government takes care of the reintegration activities during detention and hands over the baton to the municipality of a detainee, when he is released. However, to some degree municipalities are already involved during detention. This is done to ensure that a convict already has an identity card, a house and an income when he leaves prison. In some cases, the central government still has a say in reintegration activities taking place after the prisoner's release. This is the case when the release is conditional or when a convicted person can serve out his sentence at home. The responsibilities of the central government and the municipalities and how they should cooperate is laid down in an agreement from 2014 between the association of Dutch municipalities and the ministry for justice and security and (Vereniging van Nederlandse Gemeenten (Association of Dutch Municipalities & Ministerie van Justitie en Veiligheid (Ministry of Justice and Safety), 2014).

The reintegration activities as described in the agreement relate to practical problems that a prisoner encounters when he leaves the prison gate after being released. When he does not have a job, it is important that he can get a benefit. But without an identity card and a home address, this is not possible. And without an income, contacting his former partners in crime may seem the only way out. Therefore, it is important that these practical matters, for which municipalities are responsible, are arranged before release from prison. This is also true for other problems former detainees may have to deal with. Many detainees have debts and/or health problems, which are not always solved during detention. Furthermore, most of them do not have a job when they are released. When the municipality knows about these problems during detention, it can already start informing the detainee about municipal departments and other organisations that can provide help.

Participation in reintegration activities that come under the agreement is voluntary. However, it should be noted that most reintegration activities fall outside the agreement. Both the central government and municipalities have their own reintegration activities and measures. Non-participation in the latter policies can lead to sanctions and in that sense, participation is not completely voluntary.

Reintegration during detention

At the start of the detention, the detainee sets up a detention and reintegration plan together with a case manager. Reintegration is first and for all seen as a responsibility of the detainee. Parts of the plan are exchanged with the relevant municipality to enable the latter to start its reintegration activities during detention.

Motivation and what the prison sees as positive behaviour are preconditions for full access to reintegration activities. Dutch prisons have a system of promotion and degradation. Behaviour that is seen as positive by the prison leads to more liberties and access to more services (including reintegration services), while negative behaviour leads to denial of these liberties and services. Detainees with more liberties fall under a different regime and are in

a separate part of the prison. This process of gradually gaining more liberties is called 'detention phasing. [iii] Getting more liberties reflects the increasing responsibility of the detainee to handle these liberties. The latter can be an important intermediate outcome that is expected to affect reintegration positively. Prison staff working with the detainees daily are supposed to play an important role in changing the mindset of prisoners in this direction.

During detention, the following reintegration activities are available for detainees[iv]:
- The reintegration guide, which provides information about available instruments and services;
- The Reflector, a questionnaire motivating detainees to think about themselves.
- Choose for change, a training course learning detainees how they can get their life in order again, without crime;
- Activities aimed at returning to society;
- The reintegration centre;
- Work;
- Education.
- Sports;
- Care.

Reintegration is not available for detainees sentenced for a very short duration. However, in practice even people with a sentence up to four weeks have hardly access to reintegration activities. [v] Another category of prisoners that do not have access are the ones with very long sentences who have not yet reached the last phase of their detention. A further condition for their access to reintegration is that they have been allowed to enter detention phasing,

Work is the most important reintegration activity in terms of time spent by detainees. Usually, they work 20 hours per week. It allows them to earn money, obtain work experience and follow work-related training. Recently, work during prison is increasingly used as an instrument to increase the chance of finding paid work after release from prison. Firstly, a central division within the Department of Judicial Institutions was installed with the task to coordinate the labour divisions of prisons. Secondly, it is now possible for detainees, to work outside prison for a normal employer during the last phase of their imprisonment. However, this is only possible for prisoners who have qualified for detention phasing. Refusing to work is one of the reasons why access to detention phasing can be denied. When a detainee does not want to work, he must spend the time otherwise devoted to work in his cell. This is part of the system of 'promotion' and 'degradation'. Thirdly, there are opportunities for detainees to follow training courses that improve their chances in the labour market.

In principle, education could also be an important instrument to enhance reintegration into the labour market. There is a strong positive relation between a person's level of education and his chance of being employed. Most detainees have a relatively low education, which reduces their employment chances considerably. Of the individuals who entered prison between October 2010 and April 2011 and have been followed by the so-called Prison Project, 60 per cent has a diploma not higher than the lower grade of secondary education, which is twice as high as for the entire male population between 15 and 65 years of age.[vi] The employment rate for people in this educational category is only 50 per cent, while it is 77 per cent for people with a diploma of the higher grade of secondary education or a diploma in higher education. This means that low educated detainees can improve their labour market chances by increasing their level of education. Detainees have the right to

follow education during detention, but we do not know to what extent this happens in practice. Neither do we know whether it is actually used as a reintegration instrument.

Both physical and mental health are important determinants of job entry chances of jobless persons. The employment rate of people with a health problem is considerably lower than among healthy people[vii]. Hence, health care for detainees could contribute to better labour market chances.

According to the website of the Department for Judicial Institutions (DJI), which is responsible for the enforcement of custodial sentences, the following DJI staff members are involved in reintegration activities:
- Case managers: they form the pivot of reintegration activities within prisons and are in contact with municipal officials who coordinate reintegration for their municipality.
- Senior prison staff members who deal with prisoners daily and act as mentors for the latter.
- Staff members of the labour divisions within prisons.
- Teachers who are employed by DJI (most teachers involved in teaching detainees are employed by regional schools for secondary vocational education).
- Physical education instructors.
- Spiritual counsellors.

Professionals who provide mental or physical care to detainees are not mentioned, although promoting reintegration is one of the official goals of this care. Most of them are not employed by prisons but by psychiatric clinics that fall under DJI, or by institutions that are part of the official health system.

Although mentors play a pivotal role in the guidance of prisoners, other prison officers also play a role in the process of adjusting the conduct of the prisoner to what is needed for his reintegration in society.

However, the question is whether these activities should be considered entirely as reintegration. One could argue that at least some of the activities mentioned would also take place if reintegration had to priority. There are at least two reasons for this. Firstly, work, sport, education and care are also provided for humanitarian reasons. Secondly, these activities keep the inmates busy, make them feel better and thus contribute to a better and quieter climate in prisons. Only case managers are full-time engaged in reintegration. Staff hours and other resources spent on the other activities can only partly be attributed to reintegration.

There is no evidence that detention as such is a factor stimulating reintegration. One might think that detention has a deterrent effect, which reduces the chance of a repeat offense. However, existing studies (for instance a review of earlier studies by Nagin et al (2009 and a study by Bales and Piquer (2012)) suggest that detention increases recidivism instead of reducing it. Detention brings criminals in contact with each other. Furthermore, it may give a scarring effect. Therefore, reintegration activities can at least partly be considered as attempts to compensate for the negative effects of detention. These negative effects have been acknowledged by the authorities and have led to more opportunities to serve a sentence at home and, when a detainee has proved that he can deal with more liberties, to spend more time at home or work outside prison.

Reintegration after detention

Compared to the way prisons deal with reintegration, the approach to reintegration followed by municipalities is much more heterogenous (Raad voor Strafrechttoepassing en Jeugdbescherming (Council for the application of criminal law and youth protection), 2017, p. 4; De Koning et al. 2016, chapter 4 and annex IV). This is already the case for the intensity by which municipalities offer help during detention. But also, after detention there are important differences in how municipalities deal with reintegration. Some municipalities consider it the sole purpose of reintegration to inform detainees about: a) entitlement to benefits, b) referral to job vacancies and other employment services, c) debt assistance and d) care. These services are available to every municipal resident who needs it. These municipalities are of the opinion that former detainees should be treated like every other resident. Other municipalities, however, have developed specific employment measures for former detainees and deploy specific staff to deal with the latter. Finally, there are differences in the way municipalities organise their reintegration activities for former detainees. In some municipalities an important role is played by an institution (the so-called Safety House) in which all organisations dealing with security issues (like the municipality, the police, the public prosecutor and the probation service) work together. This seems particularly important for the more complex cases. In other municipalities, however, this institution hardly plays a role in reintegration.

The new approach to reintegration, which implies a more important role for municipalities, has come into effect in 2014. In 2016 we noted that the organisation and implementation of reintegration policy by municipalities was still far from ideal (De Koning et al, 2016). This was also true for the cooperation with prisons. Particularly, the exchange of information was not optimal. As a result of the closure of many prisons due to a declining trend in the number of convicts, many detainees are imprisoned far from their municipality. This development makes it more difficult for municipalities to provide services to inmates. These conclusions were confirmed in the earlier mentioned advice from the Council for criminal law application and youth protection.

Available information about reintegration and reintegration outcomes
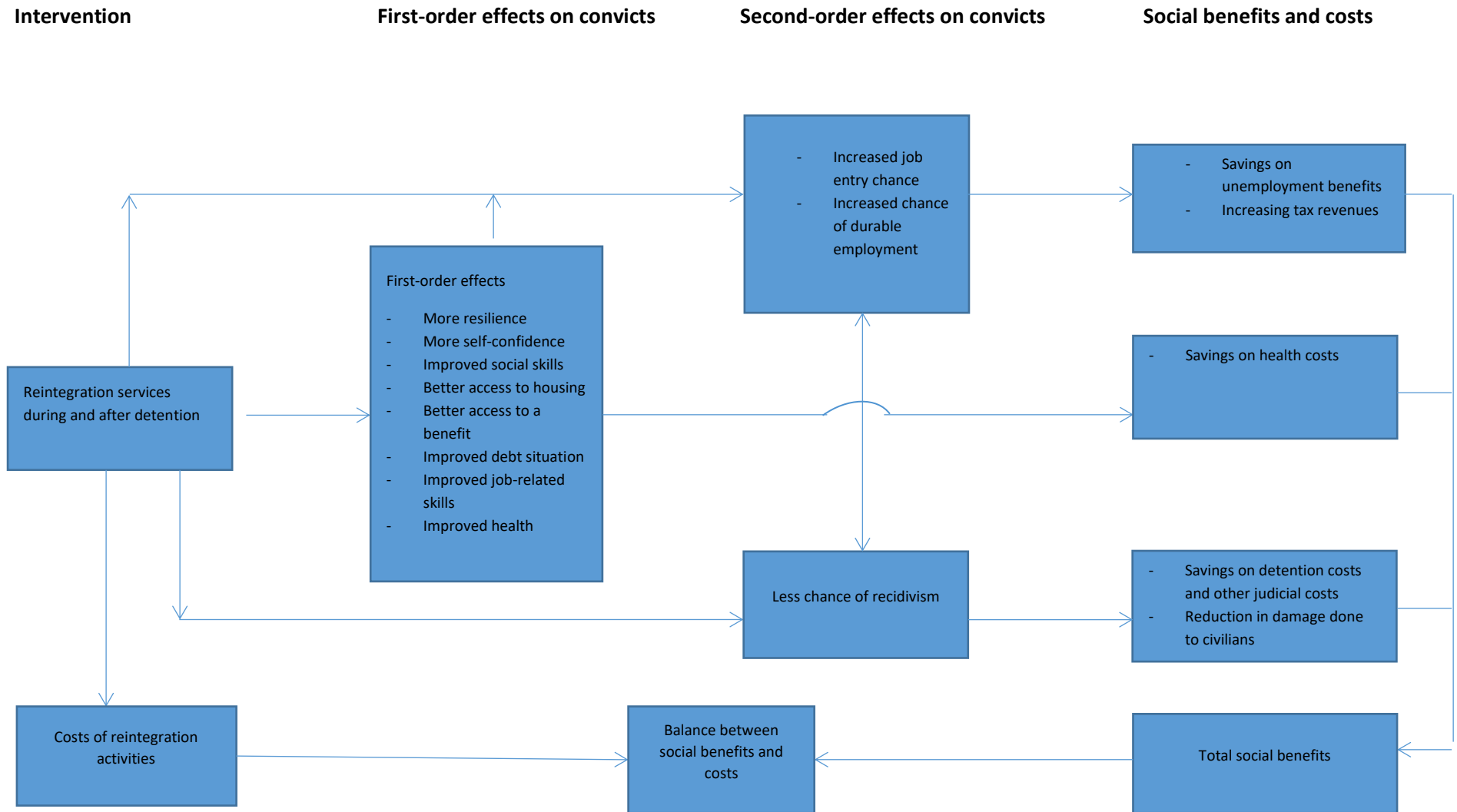
As far as we know, the available information about the actual participation of detainees in reintegration during and after their detention is far from complete. Most information is provided by the Reintegration Monitor, which concentrates on the extent to which the five basic needs (in possession of an identity card, income and housing, and access to debt services and health care) are fulfilled.[viii] However, this monitor does not provide information about the participation in the reintegration services provided by prisons and neither about the use of municipal employment services.

OVERVIEW OF POTENTIAL BENEFITS AND COSTS.

Benefits

In figure 1, the most important potential benefits of reintegration activities for convicts are shown. First, these activities can bring about changes in attitudes and social competences. Detainees may become more resilient and motivated to lead a normal life, and gain self-confidence and self-control. Other possible first-order results are a better health, a higher education and improved job-related competences. Furthermore, in principle, the government can guarantee access to housing and income directly after release from prison. Detainees who are given the opportunity to work outside prison for a regular

Figure 1 Schematic overview of effects, benefits and costs associated with the reintegration of detainees

Intervention

First-order effects on convicts

Second-order effects on convicts

Social benefits and costs

- Increased job entry chance
- Increased chance of durable employment

- Savings on unemployment benefits
- Increasing tax revenues

First-order effects

- More resilience
- More self-confidence
- Improved social skills
- Better access to housing
- Better access to a benefit
- Improved debt situation
- Improved job-related skills
- Improved health

Reintegration services during and after detention

- Savings on health costs

Less chance of recidivism

- Savings on detention costs and other judicial costs
- Reduction in damage done to civilians

Costs of reintegration activities

Balance between social benefits and costs

Total social benefits

employer and make good use of this opportunity, will improve their CV. As we have indicated earlier, increased access to health care is also part of the service package of reintegration. Therefore, improved health may also be one of the first-order effects of reintegration. These direct results may have two important second order effects: a lower chance of recidivism and a higher chance to find employment and to remain employed. The latter effect will also reduce the use of unemployment benefits. When a former detainee finds employment, this may further reduce the chance of recidivism.

If these effects do occur, several societal benefits are implied. Higher employment rates among former convicts lead to higher tax revenues and to a lower use of social benefits. Lower recidivism implies less crime and thus less victims and damage and leads to a reduction in judicial costs. The latter consist of reduced police costs, reduced prosecution costs and reduced detention costs. The latter reductions can only be realised through cutting judicial capacity, by reducing staff size, office space and equipment. However, such adjustments take time. Therefore, the savings implied are long-term savings.

With respect to unemployment benefits and health costs short-term and long-term effects may differ considerably. The initial effect of reintegration activities is probably that the use of benefits and health services increases, which would lead to a rise rather than a decline in costs. If reintegration succeeds in higher and more durable employment among former convicts, unemployment will be lower in the long run. And if health services within the framework of reintegration lead to improved health, health costs might be lower in the future. Attempts to dissuade detainees from addiction can be taken as an example. If it is successful, it can permanently improve their health.

It is important to note that the effects mentioned, and the benefits associated with it, are theoretical effects and benefits. Whether these effects and benefits really occur and whether the benefits are high enough to cover the costs of the reintegration activities remains to be seen.

Figure 1 does not pretend to be complete. An important aspect that is lacking is displacement. When employment among former convicts increases as a result of reintegration activities, it may reduce employment among other groups. The latter could then experience higher unemployment and negative health effects. Furthermore, crime rates among these groups could increase. The social costs involved could then partly or wholly flatten out the savings obtained from reintegration.

Our schematic representation of societal costs and benefits does not necessarily reflect the objectives of convicts. This is only the case if convicts are willing to change to a life without crime and to integrate into society. In that case, higher job entry chances and lower chances of recidivism will also be valued positively by them. However, those who want to continue with their old life will probably not be positive about the results that reintegration activities are trying to achieve. For some this can be a reason not to participate in reintegration. Others may choose to participate in reintegration activities, even though they are not willing to reintegrate. For some of them it may just be a way to have a better life in prison. As we have pointed out earlier in this paper, showing a positive attitude towards reintegration leads to a better regime for detainees.

Costs

The costs of reintegration activities are largely borne by the ministry of safety and justice and by municipalities. In trying to figure out what the costs are, we again encounter the problem that it is not exactly clear which activities belong to reintegration. This is only clear with respect to the reintegration coordinators in prisons. Such coordinators would not exist, if reintegration had no priority whatsoever. For other activities that might have positive effects on reintegration this is not the case. The mentoring role of prison officers is only one aspect of their work. Only a limited part of their time can be attributed to reintegration. Furthermore, work, education, sports and care are also or even primarily provided for humanitarian reasons and to improve the prison climate. Only some activities of the work division within a prison that are explicitly intended to improve job opportunities after detention can be counted as reintegration. This is, for example, true for staff efforts to find firms that are willing to employ detainees during the last part of their detention. Activities that would also take place if reintegration had no

priority, may still have positive effects on reintegration. Sports, for example, will improve a person's health, which will increase his employment chances. The latter effect can then be considered as a side effect.

Therefore, only a limited part of the costs of prison staff involved in the activities mentioned can be attributed to reintegration. It is important to note that not only wage costs should be considered, but also overhead costs. A reintegration officer has an office place, is supported by administrative staff and makes use of general services available to prison employees.

Municipalities also employ reintegration coordinators. The role of these coordinators is to provide practical help to people during and after detention and to mediate them to the municipal department for work and income (DWI) and to public providers of health. DWI provides benefits, job search assistance and help for those who must contend with debts. In many cases, these services are available to all citizens who meet the criteria for service provision. However, some municipalities have developed services specifically aimed at former detainees. An example is a special department within The Hague's DWI dedicated to former detainees. In municipal reintegration also so-called Safety Houses are often involved. In these 'houses' all local organisations involved in justice and safety are represented. Small municipalities do not have their own Safety House but participate in one located in a nearby bigger municipality. Not every Safety House is equally involved in reintegration activities and some are not involved at all.

Only the municipal reintegration coordinators can be completely attributed to reintegration. By saying this, we must keep in mind that it is not always a full-time position. Costs include both direct labour costs and overhead costs. As far as staff members of the Safety House are involved in reintegration, their costs must also be included.

The employment and health services used by former detainees do not automatically fall under reintegration policy for former detainees. As we pointed out in the previous paragraph, these services are often available to a general public. In many municipalities, the employment and health services that former detainees can use are the same as the ones used by 'normal' citizens. When a person becomes unemployed after release from prison, DWI must treat him in the same way as every other person. The same is true for health care organisations. It is possible, however, that owing to the activities of reintegration coordinators, more former detainees make use of these services. Only the part that is additional can be attributed to reintegration policy for detainees. This is even true for municipalities with specific employment policies for former detainees. Without these specific services it is likely that at least some of the former detainees had made use of the regular services.

Who benefits?

The ministry of safety and justice (which includes DJI) and municipalities can all profit from reintegration. If reintegration leads to a reduction in recidivism, detention costs and other judicial costs will diminish. And if, as a result of reintegration, former detainees have higher employment rates and a lower unemployment rate, savings on the municipal expenses on social assistance benefits may occur. However, an important goal of reintegration policy is to ensure that detainees have an income directly after their release from prison. Later in this paper we will show that employment rates among former convicts are low. Ensuring that former detainees receive social assistance benefits may then lead to an increase instead of a decrease in spending on these benefits.

Also, other parts of the public sector may benefit from reintegration activities. For example, a higher employment rate for former detainees means higher tax revenues. Specific care for detainees may not only contribute to lower recidivism, but also to a structural improvement in their health and to a lower future use of health services. However, the latter effect and the resulting future savings on health costs are not by definition sufficiently high to outweigh the initial additional investment in health services. When a reduction in recidivism leads to lower crime rates, the damage done to citizens will diminish. Citizens may therefore also benefit.

If the total benefits of reintegration activities are higher than the total costs, this does not automatically mean that this applies to every actor. If reintegration policy leads to lower rates of recidivism, but to a rising number of social assistance claimants, it may well be that the ministry of safety and justice profits from it, while municipalities experience a loss. An actor experiencing a loss can become be less motivated to implement his part of reintegration policy. As a result, the effectiveness of the latter policy could be affected negatively. When the costs and benefits for each partner are made visible, it becomes clear what a fair distribution of costs is. This can also be a reason to carry out a cost-benefit analysis.

ESTIMATING THE BENEFITS OF REINTEGRATION FOR SOCIETY

OVERVIEW OF THE METHOD USED

We concentrate on the benefits that are generated because after release from prison, former detainees:

- have a job more often or longer;
- are less often in an unemployment benefit or experience shorter spells in an unemployment benefit;
- are less often in renewed detention or experience shorter spells of detention.

We consider the actual situation as an approximation of the situation in which detainees participate in reintegration. This assumption had to be made in the absence of a better alternative but is not entirely correct. We have seen that some categories among the detainees do not participate in these activities. This means that if reintegration activities are effective, the results for participants are probably underestimated by the observations. In that case, their employment rate and their recidivism are likely to be more favourable than for non-participants. On the other hand, a lower number of participants also leads to higher costs of reintegration activities per participant.

For detainees who were released in two years, we have individual longitudinal data about their monthly situation in the first year after release. Each month we know whether the former detainees were in employment, in unemployment with a benefit, or in another situation. The latter situation includes the possibility of renewed detention, but this is not visible in the data. We do have information about the chance that after release a detainee is again imprisonment after one year and after two years. Based on this data we construct a transition matrix containing the monthly transition probabilities between four situations: employed, unemployed and claiming a benefit, detained and 'other'.

Based on national and international studies about the effectiveness of reintegration activities for detainees, we make credible assumptions about the effects of these activities on the transition probabilities between the four earlier mentioned situations. Then we can compute what the transition probabilities would have been without participation in reintegration activities. However, there is considerable uncertainty about the effects of reintegration. There are only few Dutch studies. Foreign studies deal with a different system and may not be applicable to the Dutch situation. Furthermore, the methodology of most studies is not reliable. Therefore, we consider three scenarios: 1) a zero-effect scenario, 2) an intermediate effect scenario, and 3) a high effect scenario.

The transition probabilities are extrapolated from the first to the fifth year. By applying these probabilities, we than compute for a period of five years how many months a person is in employment, in unemployment and claiming a benefit, in detention and in the situation 'other'. By comparing the outcomes with and without reintegration, we can compute to what extent reintegration leads to more months in employment and less months in unemployment or detention. This forms the basis of the computation of the benefits. More months in employment leads to higher tax revenues, less months in unemployment to savings on unemployment benefits and less months in detention to savings on

detention costs. Furthermore, a lower incidence of renewed detentions also leads to savings on other judicial costs and to lower costs for civilians.

Data

The data are taken from several data bases covering longitudinal micro data for all citizens of the Netherlands. The various databases are linked to each other by the personal code of each citizen. Together these databases form the System of Social Statistical databases (SSB) that was developed by the Dutch Statistical Office. It contains data about employment, unemployment benefits, education, wage income, hours worked, personal characteristics and other variables. With the help of SSB the Statistical Office prepared a data file containing information about detainees who were released in the second half of 2011 or the second half of 2012. This data contains detailed information about the situation of the former detainees during the first year after release. For each person we know at the end of every months whether he is employed, unemployed and claiming a benefit or in neither of these situations. Former detainees with a shorter detention period than two weeks were not included in this data file, because they have had no access to reintegration activities.

Table 1 shows how former detainees were distributed over the three situations at three points in time: the end of the first month after detention, half a year after detention and one year after detention. After a month 14 per cent of the former detainees are employed, 49 per cent are unemployed and claiming a benefit and 36 per cent are in neither of these situations. After a year the share of the employed is only slightly changed: from 14 to 16 per cent. Also, the share of the unemployed has increased slightly. The share of the ones who are not participating in the labour market has diminished with four per cent points. The latter category also contains persons who have come in renewed detention. The changes during the first six months are much stronger than in the second half of the year, which suggests that the employment rate will not increase much more after the first year. When interpreting the results in table 1, we must also take into consideration that a considerable part of the ones that are employed after the first month was already employed before their detention and could maintain their older job. According to Beerthuizen e.a. (2015) 60 percent of the ones who had a job or followed a course before their detention pick up this job or course again after their detention. This means that job entry rates of detainees are much lower than for the average social assistance claimant. The figures in table 1 also imply that the effects of reintegration activities on employment cannot be very high and more likely are relatively small.

Table 1   *Percentage distribution of the time former detainees have spent in employment, in unemployment while claiming a benefit and in neither of these situations*

	Released from prison in 2011 or 2012		
	First month after detention	Six months after detention	One year after detention
Employed	14,2	15,8	16,6
Unemployed, while claiming a benefit	49,4	52,8	51,9
Neither employed, nor unemployed with a benefit	36,4	31,4	31,5
Total	100	100	100
N	22.264	21.470	21.328

Source: datafile with individual data about participation in paid labour and use of unemployment benefits during the first year after release from prison (Statistics Netherlands, authorised by DJI).

In the data file, detention is not included as a separate status. Detention is part of the broader category 'neither employed, nor unemployed with a benefit'. From another source (DJI, 2015), we know that 20 per cent of the detainees that were released from prison are again detained within one year. Within two years, the figure is 31 per cent.[ix]

DJI has also published information about detention duration (DJI, 2015). This information is given in table 2. It concerns the distribution of the time detainees were already in detention on September 30, 2014.

Table 2   *Distribution of the population of the detainees according to the time already spent in detention (September 30, 2014)*

Duration	% on September 30, 2014
At least 2 weeks, but shorter than 1 month	10,9*
At least 1 month, but shorter than 3 months	18,1
At least 3 month, but shorter than 6 months	16,1
At least 6 months, but shorter than 1 year	17,7
1 jaar or longer	37,2
Total	100

* Estimate made by halving the category 'shorter than one month',

Source: DJI (2015).

Specification of the transition model

We used the data to quantify a transition model that determines the distribution of the former detainees over the four statuses: employed, unemployed with a benefit, detained and 'other'. This model acknowledges that the situation of a former detainee may change over time. Unemployed individuals may find employment, become detained again or stay out of prison, but retreat from the labour market. Of course, it is also possible that they remain unemployed. From each situation three different transitions are possible.

The general specification of the model is that of a Markov model:

$$x(t+1) = P(t)\, x(t) \tag{1}$$

In this formula x is a vector with the distribution of the former detainees over the four statuses and P is a 4x4 matrix with transition probabilities. Starting from a given status a person may keep this status or go to one of the three other statuses. The probabilities involved add up to 1. Hence, there are 12 parameters to be determined. However, it is likely that these parameters are not constant over time. There is a lot of evidence, for example, that the longer unemployed a person is, the lower his chances to find a job are.[x] One of the reasons is that employers view unemployment duration as a signal for low productivity and poor motivation. It is also plausible that the longer a person is employment, the higher the chance that he remains employed. If a worker appears to be productive, the employer will be inclined to bind the worker to his firm, because it will be costly to find another worker with the same productivity. Therefore, in formula (1) the matrix P depends on time t. So, if we multiply the transition matrix (P(t) at time t with the vector giving the distribution of the statuses of the former detainees at time t we obtain the distribution of the statuses at time t+1. Time is measured in months. Time is 0 at the time of release from prison. This is the starting point of the computations. By applying the model

for time 0, 1, 2, T, we can derive a time series of x for a period of length T. Then we can compute how many months in this period former detainees have been in employment, how many months in unemployment, while claiming a benefit, how many months in detention and how many months in the situation 'other'.

Our model does not take cumulation effects into account. Cumulation means that a current unemployment period increases the chance of future unemployment periods. There is some evidence for this mechanism. [xi] However, quantifying this mechanism requires data covering a longer period than our data does. Neither do we take contextual factors into account. The labour market history of the former convicts in our data file may depend on the specific labour market situation in 2011 and 2012. On the other hand, one could argue that the same labour market situation had applied if these convicts would not have participated in reintegration activities. The differences in outcomes between the two histories may not depend so much on the labour market situation. This is at least the experience in reintegration policy for unemployed people (Card, Kluve & Weber, 2010).

Calibration of the model

For the first year after detention some of the transition probabilities could be directly derived from the data. This is the case for the transitions between employment, unemployment with a benefit and the situation 'neither employed nor unemployed with a benefit'. The latter status includes being detained. Based on duration data, the chance that a person released from prison and imprisoned again after one month, is still imprisoned at the end of the next month, is set at 84,0 per cent. Still, we must split up the transition probabilities from 'employment' to 'neither employed, nor unemployed' into two transition probabilities: the transition probability from employment to detention and from employment to 'other' (not employed, not unemployed and not in detention). The same must be done with respect to the transition probability from unemployment to 'neither employed nor unemployed. In the same way the transition probabilities from 'neither employed nor unemployed' to 'employed' and to 'unemployed' must be split up. Furthermore, there are transitions between detention and 'other' with corresponding probabilities.

We make use of some of restrictions. Firstly, the transition probabilities from a given status to all other statuses must be equal to 1 minus the probability of remaining in the initial situation. Secondly, application of the transition matrix to the situation in month t has to produce the observed distribution over the statuses in month t+1. Furthermore, repeated application must produce the observed recidivism after one and two years. [xii] However, these restrictions are still insufficient to determine all the transition probabilities. Additional assumptions must be made. Our first assumption is that the probabilities to go from unemployment or 'other' to detention are the same, and twice as high the chance to go from employment to detention. The second assumption, which is supposed to hold for all transition probabilities, is that as soon as people stay in a situation for longer than a month, transition probabilities out of this situation diminish the longer a person is in this situation.

More details about the calibration is given in De Koning et al (2016).

As an example, table 3 gives the transition probabilities in the first month after prison release. It is striking that 25 per cent of the former detainees who found employment after prison release, have already lost their job a month later. And being out of employment, the chances of finding a job are relatively small. It is not surprising then, that table 1 showed that only a relatively small percentage of the former detainees were employed and that this percentage hardly grew over time. From table 3 we can also conclude that even if a former detainee finds employment, the chances of durable inclusion in the workforce are small.

Table 3   Transition probabilities in the first month after release

Situatiion	Employed	Unemployed with a benefit	Detention	Other
Employed	0,750	0,102	0,016	0,132
Unemployed with a benefit	0,045	0,875	0,024	0,056
Detention	0,024	0,083	0,840	0,053
Other	0,064	0,177	0,024	0,735

As explained earlier, the transition probabilities gradually change after the first month. Given the situation in the first month after prison release (x(0)), the distribution of the former detainees over the four statuses for month t+1 has been computed by multiplying P(t) by x(t). In table A.1 (see the annex) the results of these computations for the first 12 months are confronted with the data. It appears that the model gives a good representation of the data. Computations have been made for a period of 5 years. We also computed the chance of recidivism after one year and after two years. As table A.1 shows, the discrepancies with the data are somewhat larger here, but still small.

Effectiveness of reintegration measures

Although we do not have data about the participation of detainees in reintegration activities, it is likely that a considerable proportion of the people released from prison have had some help in their reintegration in society. In our model calculations we assume that the calibrated transition probabilities reflect the situation in which detainees participate in reintegration activities. Suppose that we knew the effects of reintegration on the transition probabilities. Then we could compute what the transition probabilities would have been in the situation without reintegration activities by subtracting the effects from the calibrated probabilities discussed in the previous section.

What does the literature tell us about the effects of reintegration activities for detainees? [xiii] Several studies evaluate reintegration measures that have some similarity to Dutch policies. Christofferson (2014) discusses the results of a study (Maré and Hyslop, 2011) evaluating two different reintegration programs in New Zeeland aiming at employing former convicts. Participating in the two programs reduces recidivism after one year by 4,8 and 8,2 percent points, respectively, compared to a group of non-participants. A study by Sedgley et al (2010) dealing with two employment programs and one training program in Ohio finds that 38,9 per cent of the non-participants were imprisoned again within one year, while recidivism was only 13,8 to 17,4 per cent for participants. After correction for differences in composition between the two groups, participants stay out of prison 1,2 to 1,6 times longer than non-participants. Skardhamar en Telle (2012) find that participation in labour market programs after detention reduces the chance of renewed detention within three years from 56,6 to 47,7 per cent. When differences in characteristics between participants and non-participants are considered, participants stay 1,1 to 1,2 times longer out of detention compared to non-participants.

Other studies look at the effect of reintegration measures on job entry chances. A Dutch study by Weijters et al. (2013) finds that participation in a reintegration pathway measure leads to a 32 per cent increase in the chance of finding a job or a training place after detention. An employment program in the US increases the job entry chance from 63,4 per cent to 78,1 per cent (Bohmert & Duwe, 2011). Ramakers et al. (2011) compare the job chance of convicts who were released in the past with the job chance of people who were unemployed at the same time, but of whom we know that they have become detained later. The job chance of the former convicts is higher than of the unemployed who have become detained in the future (80,2 per cent against 52,6 per cent). The authors claim that this difference may be partly due to participation in reintegration. However, it is unclear to what extent the two groups are comparable.

This brings us back to a common feature of the studies mentioned, namely that their methodology does not guarantee reliable outcomes. They do not make use of a randomised control group approach, which is the most reliable evaluation method. Neither do they use non-experimental methods that convincingly correct for selection bias. For some special cases such as the evaluation of the effect of an intervention on a duration variable, non-experimental methods have been developed that provide a consistent estimator of the effect.[xiv] Not or not convincingly correcting for selection bias will probably lead to overestimation of the effect. We earlier discussed the fact that detainees cannot be forced to participate in reintegration. It is quite possible that those who participate are more motivated to reintegrate in society and to find employment. Factors like motivation may then cause the higher employment rate of the latter group.[xv] The extensive literature on employment policies for the unemployed shows that the earlier studies that did not correct for selection bias were often too optimistic about the effects. Studies using an adequate methodology almost invariably find relatively small effects on labour market inclusion. Of course, the latter conclusion cannot simply be transposed reintegration of detainees. However, a recent study by Newton et al. (2018) shows that the lessons of employment policies for the unemployed must be taken seriously. In this article seven studies are reviewed that evaluate measures in the field of training and education aimed at increasing job entry changes of detainees after their release. All seven studies make use of a randomly assigned control group approach or a non-experimental method that accounts for selection bias. Although the effects found are significant in most cases, the effects are generally small. The programs evaluated start after detention with one exception. This programs gives support during and after detention. The mix of instruments used in this program makes it the one that looks most like the Dutch approach. However, the effects found for this program are insignificant. This does not prove that the same holds for Dutch reintegration policy. There are still many differences between the Netherlands and the United States with respect to reintegration policy and the contextual situation. However, this study can be seen as a warning that large effects are certainly not obvious.

Existing studies concentrate on the effects of reintegration measures on inclusion in the labour market and on recidivism. The outcomes of the studies do not precisely tell us how to adjust the transition probabilities. We have calibrated the transition probabilities in the situation without reintegration measures in such a way that the results for the two situations (with and without participation in reintegration measures) lead to effects that are comparable with the literature. In view of the uncertainty about the effects we use three scenarios. In the first (pessimistic) scenario, effects are zero. The third (optimistic) scenario assumes effects that are at the upper bound of what has been found in the literature. Finally, we have the intermediate scenario. In the latter scenario, the employment effects are still somewhat higher than what is found in the evaluation literature with respect to employment policies for the unemployed. We think that this assumption is defensible as former convicts belong to the most disadvantaged groups in the labour market. Probably, reintegration measures are more effective for the latter groups than for unemployed people with a higher profile in the labour market. Table 4 gives the results of the three scenarios. As was pointed out earlier, it is likely that the outcomes for the situation with reintegration activities underestimate the effects, because they are based on data about a group of former detainees who have not all participated in reintegration activities.

As was already pointed out, the situation with reintegration activities is our reference point. Hence, the scenarios are all the same as to the situation with reintegration activities and differ as to the situation without reintegration activities. In all scenarios, the intermediate scenario assumes a reduction in recidivism of five percent points within one year[xvi] and an increase of 15 percent points in the share of the former convicts that finds a job with two years.[xvii] In the high scenario detention recidivism is 10 percent points lower and the employment share 20 percent points higher.
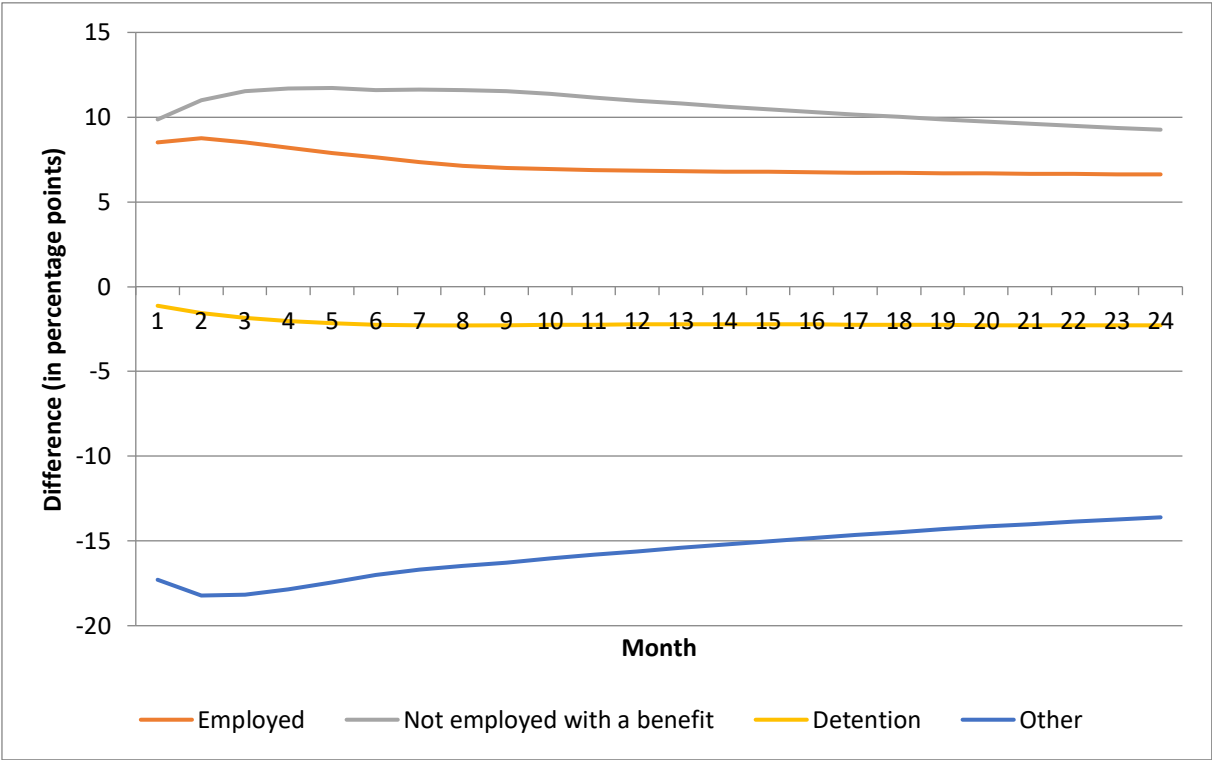
Table 4   *Effects of reintegration activities in three scenarios based on the quantified transition model (percentage points)*

	Without reintegration activities	With reintegration activities	Difference
Scenario 1 (zero effects)			
Detention recidivism within 1 year	20,6	20,6	0
Job entry chance within 2 years	44,3	44,3	0
Situation 2 years after detention:			0
Employed	19,0	19,0	0
Unemployed with a benefit	49,1	49,1	0
Detained	8,5	8,5	0
Other	23,4	23,4	0
Total	100	100	
Scenario 2 (intermediate effects)			
Detention recidivism within 1 year	25,5	20,6	-4,9
Job entry chance within 2 years	29,6	44,3	14,7
Situation 2 years after detention:			
Employed	12,4	19,0	6,6
Unemployed with a benefit	39,8	49,1	9,3
Detained	10,8	8,5	-2,3
Other	37,0	23,4	-13,6
Total	100	100	0
Scenario 3 (high effects)			
Detention recidivism within 1 year	30,4	20,6	-9,8
Job entry chance within 2 years	24,1	44,3	20,3
Situation 2 years after detention:			
Employed	9,9	19,0	9,1
Unemployed with a benefit	38,2	49,1	10,9
Detained	12,4	8,5	-3,8
Other	39,5	23,4	-16,2
Total	100	100	0

The former detainees are in high risk of losing their job once they have found one. This explains why the percentage of former detainees having a job after two years is considerably lower than the percentage that found a job in this period. Most of the latter lost their job again. If we look in more detail at the situation two years after release from prison, we see that in the intermediate scenario 6,6 percent points more detainees have a job, while this is 9,1 percent points in the high scenario. It may seem surprising that the results imply that reintegration activities lead to a higher share of unemployed with a benefit. However, one of the objectives of reintegration policy for detainees is to ensure that the latter have an income after release. As many of them have no job, this means that reintegration coordinators help detainees to obtain a benefit. Therefore, it is logical that at least initially reintegration policy leads to a higher share of benefit claimants and to a lower share of the category 'other'. Figure 2 shows the differences between the situations with and without reintegration from month to month according to the intermediate scenario. With respect to the status 'benefit' we see that initially the effect of reintegration is 10 percent points. Then it increases slightly, followed by a gradual decrease. The effect on employment seems to stabilise on an effect between 6 and 7 points. For detention the effect seems to stabilise on an effect of 2,3 per cent. This is not yet the case for the effects on the shares of the

unemployed and the former detainees categorised as other. At the end of the five-year period we still see an ongoing decline in the effects on these categories.

Figure 2   Monthly differences in the distribution of former detainees as to their status (employed, not employed with a benefit, detention and other) between the scenarios with and without reintegration activities: based on the intermediate scenario.

From effects to benefits

The benefits are computed by monetarising the differences between the scenarios with and without reintegration activities. The daily costs of detention are € 240 per person. [xviii] This implies that a reduction in detention time with one month saves € 7.300. An additional month in employment also saves additional tax revenues. The amount involved depends on the average wage earned by the former detainees. We assume that the latter earn the minimum wage, which implies a tax rate of 15 per cent.[xix] In that case the additional revue for each month worked is € 228,69. The monthly level of a benefit is assumed to equal € 1.000.[xx] As we have seen, reintegration activities lead to more rather than less former convicts claiming benefits. This means that the savings on unemployment benefits are negative. We do not monetarise the situation 'other'.

When detention is prevented by policy measures, there may be more savings in the judicial sector than savings on detention costs. When detention prevention also implies that a criminal act is prevented, there will be no criminal investigation and, when the investigation leads to a potential offender, no trial. Furthermore, harm and damage done to victims are prevented.

According to data published by the statistical office, in 2015 total expenses on safety by the public sector and the private sector amounted to about 6,7 billion euro. Excluding expenses by DJI (mainly detention and reintegration costs) it is 3,9 billion. These expenses cannot completely be attributed to people who become detained. On a yearly basis there are about a million registered crimes. It is likely that judicial costs are particularly made for registered crimes. This would mean that the average costs per registered

crime is almost 4.000 euro. Perhaps, the judicial costs (excluding detention costs) are higher for crimes that lead to a conviction and a detention. Furthermore, some detainees are convicted for more than one crime. And it is possible that they also have committed crimes that lead to investigation and prosecution but not to conviction. Therefore, 4.000 euro is probably an underestimate, Crime often leads to damage, suffering and costs for victims. A study by Groot et al (2007) concludes that on average this amounts to slightly less than 1000 euro. Taken inflation into account we estimate the amount for 2015 on 1.100 euro. Here too, it is possible that this amount is higher in case of convicted crimes.[xxi]

If prevention of a detention leads to an amount of 5.100 euro saved on judicial costs other than detention costs and on costs for victims, we can make an estimate of the costs saved per detention month. The average detention duration is about three months. Since detainees with a very short duration are not considered, we use an average of four months. Per months the amount saved on judicial costs other than detention costs and on costs for victims is then equal to 5.100/4=1.275 euro.[xxii] Total costs saved on judicial costs and costs for victims by preventing a detention month are than equal to 7.300+1.275=8.575 euro. Since most benefits occur in the future and almost all the costs in the present, the benefits are discounted. A discount rate of 0,04 is used.[xxiii]

Total benefits also depend on the length of the period during which reintegration measures remain effective. Studies investigating long-term effects are very scarce. Table 5 contains effects up to five years. The longer the period is, the higher the uncertainty is about the effects. It must be noted, however, that when the effects are zero after time t, the benefits can still grow after time t. This is due to the duration dependence of the transition probabilities.

The data refers to detainees who have been detained for at least two week, because detainee with a shorter detention do not have access to reintegration activities. However, they have equal access to municipal reintegration activities as persons with a longer detention. Therefore, also for people with a very short detention, reintegration activities may have taken place and may have caused societal benefits. The results in table 5 are based on the assumption that the average benefits are the same for those detainees compared to people with a detention longer than two weeks.[xxiv]

In the intermediate effect scenario, the benefits per detainee increase from € 2.149 after two years to € 5.850 after five years. In the high scenario, the benefits are more than twice as high: € 5.984 after two years and € 13.536 after five years. This is mainly caused by the fact that in the high effect scenario recidivism is lower than in the intermediate scenario. In the low-effect scenario the effects are zero and so are the benefits.

COSTS

Costs of reintegration activities under responsibility of the central government

The staff of judicial institutions can be divided over divisions and functions groups. For a every function group we know the staff size in terms of full-time equivalents. Furthermore, we know the labour costs per function group. If we knew which part of worktime is spent on reintegration activities, we could determine the labour costs of these activities. However, also indirect costs like housing costs and administrative support must be considered.

 As was discussed earlier in this paper it is not easy to say which part of the staff can be attributed to reintegration activities. In 2016, 3.900 prison employees might at least have had some involvement in the latter activities. Only for case managers who coordinate these activities it is certain that their work is completely in the realm of reintegration. But this job category forms only 15 per cent of the total group of 3.900.

Table 5

Table 5   *Benefits per detainee for the intermediate and the high scenario based on projections with the transition model[a)]*

	Time horizon			
	Two years	Three years	Four years	Five years
Scenario 1 (no effects)				
Work	0	0	0	0
Unemployment benefit	0	0	0	0
Detention	0	0	0	0
Judicial other than detention				
Costs for victims				
Total	0	0	0	0
Scenario 2 (intermediate effects)				
Work	€ 380	€ 540	€ 700	€ 850
Unemployment benefit	€ -2.460	€ -3.460	€ -4.430	€ -5.360
Detention	€ 4.229	€ 6.355	€ 8.399	€ 10.360
Judicial other than detention				
Costs for victims				
Total	€ 2.149	€ 3.435	€ 4.669	€ 5.850
Scenario 3 (high effects)				
Work	€ 480	€ 710	€ 930	€ 1.140
Unemployment benefit	€ -2.660	€ -3.840	€ -4.980	€ -6.070
Detention	€ 8.164	€ 11.735	€ 15.165	€ 18.466
Judicial other than detention				
Costs for victims				
Total	€ 5.984	€ 8.605	€ 11.115	€ 13.536

a)   *Computations under the assumption that the benefits for persons who have been detained for less than two weeks is the same as for persons with a longer detention.*

It is plausible that staff working in the labour and education divisions must at least partly be attributed to reintegration activities. It is difficult to say how many of them would still be employed by DJI if reintegration had no priority anymore. We distinguish between two variants. In the low-cost variant we assume that 50 per cent of their time is spent on reintegration, while it is 100 per cent in the high-cost variant. Fifty per cent may be more realistic, As was argued earlier in this paper, work and education also serve other purposes than reintegration.

The third group that plays a role in reintegration are penitentiary institution workers (PIWs) who deal with detainees daily. They used to be called wardens, but their tasks have changed. Mentoring of detainees has also become part of their work. They are supposed to deal with detainees in such a way that it helps the latter to change their behaviour. More control of their emotions, avoiding violence and a more cooperative attitude may be mentioned as examples. When mentoring succeeds in changing behaviour in this direction, it may have positive effects on reintegration. However, even if the latter effects are real, it does not necessarily mean that the work of PIWs must be classified under reintegration activities. It is still possible that the effects mentioned are side effects of their work and that the number of PIWs needed would be the same if reintegration had no priority. Furthermore, in group discussions with PIWs, it was said that owing to high work pressure there is hardly time for mentoring (De Koning et al (2016)).

On the DJI website only senior PIWs are referred to when it comes to mentoring. They form about 40 per cent of the total number of PIWs. But it is unlikely that they spend all their time on mentoring. On

the other hand, it is certainly possible that other PIWs also spend part of their time on mentoring. In the low-cost variant we assume that although PIWs may influence reintegration, this does not affect the number of PIWs needed. In this variant such an effect is purely a side effect. Hence, reintegration costs of PIWs are zero in this variant, In the high-cost variant, we assume that the mentoring role of PIWs implies that owing to this role more PIWs are needed and that 20 per cent of the costs of the current PIWs can be attributed to reintegration activities.[xxv] We do the same for some other staff like library workers. However, the number of other staff members is very small and whether they are counted under reintegration hardly affect total reintegration costs.

Table 6 gives the labour costs of the staff involved in reintegration activities. In the minimum variant these costs amount to 47 million euros and in the maximum variant 94 million euros. The difference is mainly caused by the fact that in the maximum variant PIWs are assumed to play a role in reintegration. Housing costs and overhead costs are pro rate attributed as indirect costs to the staff involved in reintegration.[xxvi] In the low-cost variant indirect costs are also lower than in the high-cost variant.

In the category indirect and other costs in table 6, the latter costs refer to penitentiary programs and activities aimed at returning to society. Penitentiary programs make it possible for detainees to spend time outside prison during the last phase of their detention. [xxvii] Under supervision they work or engage in another meaningful activities. Activities aimed at returning to society are the provision of information, counselling and training courses with respect to the five aspects that are central to the reintegration agreement between the central government and the association of Dutch municipalities.

Earlier in the paper, we explained why health care was not taken into account. The costs of health for detainees are considerable. About 100 million euro is spent on intramural health care. Furthermore, the costs of forensic care for detainees in psychiatric centres amount to almost 80 million euro. The total health care costs per detainee are then about € 9.000. This average cost figure only includes care during detention. However, health care is also provided after release from prison. Judges can make conditional release dependent on forensic care. Furthermore, municipalities can mediate former detainees to specific types of care. We do not know what the costs are of care provided after release from prison.

Costs of municipal reintegration activities

There is no systematic information available about the costs of municipal reintegration activities for detainees during and after their detention. De Koning et al (2016) have collected information about these costs for six municipalities, which include two of the four big cities (Amsterdam and The Hague). The latter implies that although these municipalities form only a few per cent of the total number of municipalities in the Netherlands, they still cover a considerable percentage of the total number of detainees in the Netherlands (in 2014 22%).

Municipal reintegration costs consist of: a) the labour costs and indirect costs of the municipal coordinators for reintegration, b) the labour and indirect costs of the staff of safety houses involved in reintegration, c the costs of specific reintegration measures implemented by municipal staff, and c) the costs of reintegration measures of which implementation is outsourced. The resulting costs per detainee are slightly less than 800 euro. However, we did not have information about all the cost categories for each municipality. Therefore, this figure gives an underestimate of the true costs.

This figure does not include the costs of participation of former detainees in reintegration measures that are accessible to anyone who claims a social assistant benefit or has an unemployment insurance benefit. About 50 per cent of the detainees becomes a benefit claimant after release from prison. The average reintegration costs for the unemployed are approximately 3.200 euro. If we assume that half of the former detainees participate in these measures, the average cost figure for former detainees is 1.600 euro. This is probably an overestimate, because not everyone with an unemployment benefit participates in a reintegration measure.

Table 6   Number of prison *staff (fte) involved in reintegration and personnel costs of this staff , minimum and maximum variant, 2016 (amounts in 1000 euros)*

Fte and personnel costs	Totals per function		Minimum variant fte and personnel costs reintegration			Maximum variant fte and personnel costs reintegration		
	Total number of fte per function	Total personnel costs per function	Percentage attributed to reintegration	Number fte reintegration	Personnel costs reintegration	Percentage attributed to reintegration	Number fte reintegration	Personnel costs reintegration
Functions completely devoted to reintegration	592	€ 30.896	100%	592	€ 30.896	100%	592	€ 30.896
Functions with an important role in reintegration	638	€ 32.383	50%	319	€ 16.191	100%	638	€ 32.383
Functions with an indirect role in reintegration	2670	€ 154.762	0%	0	€ 0	20%	534	€ 30.952
Of which PIWs	*2490*	€ 145.100	*0%*	*0*	*€ 0*	*20%*	498	€ 29.020
Total personnel (fte) and personnel costs	3900	€ 218.041	23%	911	€ 47.087	45%	1.764	€ 94.231
Indirect and other costs					€ 28.483			€ 36.644
Total costs					€ 75.570			€ 130.875
Number of detainees					33.636			33.636
Reintegration costs per detainee					€ 2,2			€ 3,9

Summary of the costs and comparing costs and benefits

Table 7 summarises the results for the costs. We end up with a central estimate of the total costs per detainee of € 5.450. Using the minimum variant of the costs borne by the central government it is 4.600 euro and in the maximum variant 6.300 euro. There is also considerable uncertainty about the costs of municipal reintegration, but there is not enough information to give an indication of this uncertainty.

Table 7   Estimates of the costs and benefits of reintegration activities per detainee, 2016

	Reintegration costs per detainee		Remarks
	Low-cost variant	High-cost variant	
Central government	€ 2.200	€ 3.900	Based on administrative data and assumptions about the time spend on reintegration by prison staff
Municipalities	€ 2.400	€ 2.400	Based on six municipalities that cover 22% of the total number of detainees in the Netherlands
			Information only partly based on administrative data
			Considerable uncertainty, but not enough information to give a minimum and a maximum estimate
Total initial reintegration costs per detainee	€ 4.600	€ 6.300	
Average reintegration costs per detainee during the five-year period	€ 2.530	€ 3.465	
Total reintegration costs per detainee during the five-year period	€ 7.130	€ 9.765	
	No effects	Intermediate effects	Hight effects
Benefits per detainee	0	€ 5.850	€ 13.536

It is important to note that in case of recidivism the individual involved will again enrol in reintegration activities. After five years the number of additional entries in reintegration is on average 0,55. Therefore, additional reintegration costs during the five-year period are taken into account. Furthermore, these additional costs have been discounted.

When we compare the costs with the benefits, we find that in the high-effects scenario the benefits exceed both the minimum and the maximum cost levels. In the intermediate-effects scenario benefits and costs do not differ much if the costs assume their minimum value. However, in the maximum variant for the costs, there is a clear loss (€ 1.280). In the zero-effect scenario there are no effects and therefore no benefits, which would result in a considerable loss for society of 7 to 10 thousand euros. However, we think that given the available evidence it is reasonable to assume that there is at least a small effect. High effects are unlikely, which suggests that the intermediate-effects scenario is the most probable one. With respect to the costs we can say that perhaps the average of the minimum variant and the maximum variant is most likely. This suggests that costs and benefits are of similar size. However, there is too much uncertainty to draw a firm conclusion.

FINAL REMARKS

In this paper we have explored the possibilities of a social cost-benefit analysis of reintegration policy for detainees based on existing information. Owing to missing information, we had to make many assumptions. An important omission is that there are not many studies evaluating reintegration measures for detainees based on a reliable methodology. And studies that do make use of such methods apply to other countries than the Netherlands. As Dutch policy in this field differs from that in other countries, we cannot be sure that the effects found for other countries also hold for the Netherlands. However, there is reason to assume that also for the Netherlands the effects are relatively small. Dutch evaluations of employment policies for the unemployed and particularly for social assistance beneficiaries show that these measures only have small effects on labour market integration. Just like social assistance beneficiaries, a considerable part of the detainees has a low education and a migration background. Employers appear to be highly reluctant to hire people with that profile. Dutch evaluations of employment measures for the unemployed point to small effects. This is also true for studies using a randomised control group approach. Based on micro data, we could follow a group of former detainees during the first year after release from prison. This data shows that only a small part of this group is successful in the labour market. And of the ones that are employed, a considerable part could keep the job they already had before detention. Probably, a considerable part of the detainees participates in reintegration activities. It is likely then, that the employment effects of these activities are relatively small. If access to employment is an important precondition for prevention of renewed detentions, this may also imply that the effects on recidivism are not that big. In view of this, we think that of the scenarios we have quantified, the scenario with intermediate effects is the most realistic one. The societal benefits in this scenario are largely due to a reduction in recidivism. As reintegration activities also lead to more social assistance beneficiaries, expenses on benefits increase rather than decrease.

One might be inclined think that it is easier to measure the costs of reintegration activities, but in our case, it proved quite difficult to find accurate information. A major drawback is that it is unclear how much of their time prison staff spends on these activities. Only for a relatively small group of prison employees, the reintegration coordinators, it is clear that what they do lies in the realm of reintegration activities. For staff dealing with work and education for the detainees it is likely that at least a considerable part of their work would still exist if reintegration had to priority. These activities also have a humanitarian purpose and perhaps also serve to avoid unrest. PIWs, who are in daily contact with detainees play a mentoring role as part of their work. However, based on qualitative data we think that on average this role takes 20 per cent of their worktime at most. It is even questionable whether many PIWs have the time to engage themselves in a mentoring role. Furthermore, it is possible that their normal work has positive behavioural effects on detainees, which positively affect reintegration. However, that would mean that these effects must be considered as side effects of their normal work. In that case the number of PIWs needed would not be smaller if reintegration had no priority. And there would be no reason to attribute part of their costs to reintegration. Overall, we think that only a relatively small part of the labour costs and the indirect costs of prison staff can be attributed to reintegration activities.

Some of the studies on which we base our estimates of the effects of reintegration also include interventions aimed at improving the mental and physical health of detainees. Health problems may be detrimental to reintegration and thus help in this field may have positive effects on reintegration. Therefore, one could argue that the costs of health care and psychiatric help must also be included in the costs of reintegration activities. For two reasons, we did not do this. It is unsure whether the studies mentioned give a representative picture of the effects of health care for detainees. Including the costs of care in the costs of reintegration would then give an unbalanced picture as positive effects of the care provided to detainees may not or only partly be reflected in the benefits. Furthermore, care for detainees may have positive effects on their future health and may even reduce the use future of health

care. As far as we know there is no information about this effect. Not including it, could further underestimate the benefits of caretaking.

Our results indicate that costs and benefits of reintegration activities may not differ much. But given all the assumptions we had to make, there is a lot of uncertainty about both costs and benefits. Hard conclusions are not possible. Therefore, it is important to think about ways to improve the analysis. Some improvements are easier to realise than others. In principle, the microdata of the National Statistical Office offers more opportunities than we could use for our study. Former detainees can be followed longer after release and it is possible to differentiate the outcomes with respect to type of crime committed, detention length and personal characteristics. It is also possible to link this data with information about detention recidivism. It would also be important to know, preferably from administrative sources, to what degree detainees were involved in reintegration activities. With the help of this information we could give a more accurate picture of the labour market integration of former convicts, their earnings, their use of unemployment benefits and other benefits, and the frequency and length of renewed detentions. Information about participation in reintegration activities and personal characteristics could help to identify the effects and benefits of reintegration. Information about the type of crime committed would help to make better estimates of the costs made in the judicial sector and of the costs experienced by victims. It is unclear to what extent information can be obtained about municipal reintegration activities for detainees. Probably, there is hardly any information about the latter that could be used for analyses.

For identifying effects of reintegration, random control trials (RCTs) must be preferred. It is no option to deny some detainees access to any kind of assistance. However, it is possible to offer different packages of reintegration activities to two groups of detainees on a random basis and observe which package is most effective. By gradually testing changes in reintegration with the help of RCTs, one could achieve a gradual increase in proven effects. This seems to be the only way for real progress. But it is an approach that may not have a lot of support in the sector.

So far, we discussed the ways of improving the measurement of effects and benefits of reintegration. It is equally possible to obtain a more reliable picture of the costs. There is a lot of information about the level and structure of prison costs and about the size and structure of prison staff. What we do not know is how many staff members would become obsolete if reintegration had no priority anymore. It is likely that in that case labour divisions would still exist within prisons, but activities specifically aimed at increasing the chance of work would disappear. The same holds for PIWs. Perhaps some aspects of their work would disappear and as a result the number of PIWs needed would diminish somewhat. Also, for other prison personnel it may well be that staff size could be reduced if reintegration were no longer an objective. With the help of interviews or a survey one could obtain an indication of the total number of staff members that could be reduced in that case. Then, given the labour costs per staff member and estimates of the indirect costs, one could get a fairly reliable estimate of the costs of reintegration activities in prisons. It will be more difficult to obtain more reliable estimates of municipal reintegration costs as municipalities differ considerably in the way they have organised reintegration activities for (former) detainees. Often, municipalities seem to have no central registration of costs and staff involved. Therefore, the contribution of municipalities to reintegration of detainees remains a bit of a blind spot.

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NOTES

[i] This paper is largely based on De Koning et al (2016). However, the paper adds some elements to the original study. For example, we add estimates of savings on other judicial costs than detention costs as well as savings on costs for victims.

[ii] Education plays a key role in the reintegration of juveniles. In Dutch society the following pathway in education is officially seen as a minimum for a successful work life: primary education (8 years), preparatory vocational education (4 years) and a two-year course in secondary vocational education. Without repeating classes, this would mean that a young person enters the labour market at the age of 18. However, often young people who

have become involved in crime do not even complete preparatory vocational education. Reintegration deals with the family circumstances and other factors that are responsible for the fact that children get involved in crime. Enabling them to obtain a diploma offering a good starting point in the labour market is seen as an essential part of reintegration. That means that the rate of return to education must play an essential role in a cost-benefit analysis of reintegration policy for juveniles. It must have a life-time horizon. Only then the full benefits can be made visible, which is important because the costs of juvenile reintegration are high.

[iii] Since March 1 2014 convicts start their detention in a Basic Program. This program consists of activities detainees are entitled to by law. These activities include work, education, recreation, airing and having visitors. During a minimum period of six weeks, they must show cooperative behaviour before they can be 'promoted' to a so-called Plus Programme, which includes more activities like reintegration services. Promotion is also a necessary condition for detention phasing.

[iv] Information about reintegration activities and staff involved in these activities has been taken from the website of the Department of Judicial Institutions (https://www.dji.nl/binaries/dji_infographic_re-integratie_tcm41-269554.pdf).

[v] Officially, detainees who have to stay in prison for less than two weeks, cannot participate in reintegration activities, because there is not enough time to organise it for them. However, the Raad voor Strafrechtstoepassing en Jeugdbescherming (2017) concludes that in practice also detainees with a detention period between two and four weeks do not participate in reintegration activities or only in some of these activities. This means that about half of the people leaving detention during a year, have not or only partially participated in reintegration activities. The problem is that recidivism for this group is not lower than for detainees with a longer detention, which suggests that reintegration activities could be equally useful for them.

[vi] Source: CBS (https://www.cbs.nl/nl-nl/nieuws/2015/27/vier-op-de-vijf-mannelijke-ex-gedetineerden-heeft-geen-werk). The Prison Project (http://www.prisonproject.nl) is a large-scale investigation into the effects of imprisonment in the Netherlands. It is a joint initiative of the University of Leyden, the Dutch Study Center for Criminality and Law Enforcement and the University of Utrecht.

[vii] For a recent literature review of the impact of health on labour market participation, see Antonisse and Garfeld (2018). Poor health has a considerable negative effect on labour market participation. There is only weak evidence for the reverse effect. Being employed may have a positive effect on health, but this effect is probably relatively small.

[viii] For more information, we refer to Beerthuizen et al (2015).

[ix] This percentage applies to adults only. If we include juveniles it is about 50 per cent.

[x] Partly, duration dependence in unemployment is caused by the fact that gradually unemployed persons with a higher profile in the labour market find a job. Gradually, among the ones left behind in unemployment the share of people with characteristics that make them less successful in the labour market increases. As a result, correction for observed and unobserved heterogeneity usually reduces the measured duration dependence. However, Kroft, Lange en Notowidigdo (2012) conclude on the basis is of a randomised experiment, that duration dependence is a real phenomenon. Their empirical findings are consistent with a theoretical model in which employers discriminate on the basis of unemployment duration.

[xi] For earlier studies in this field see Heckman et al (1980) and De Koning, Kroes & Van der Steen (2006).

[xii] Recidivism is computed in such a way that a person experiencing more than detention period is counted only once.

[xiii] For a more extensive review, we refer to De Koning et al. (2016).

[xiv] An example is the method developed by Abbring & Van den Berg (2003) which can be applied when the timing of an intervention during unemployment contains a random component. The method takes into account that this random component may be correlated with the random component of the process of finding a job, In this way the method takes into account that unobserved factors like motivation may affect both processes.

[xv] Assuming, that a sufficient number of individuals is involved in the experiment, a randomised control group approach guarantees that the group that receives 'treatment' has the same composition as the control group with respect to both observed and unobserved factors. Differences in outcomes can then be attributed to the 'treatment'.

[xvi] This leads to approximately 25% recidivism within one year in case of no participation in reintegration activities. In case of participation in reintegration activities, 25% of the detainees are imprisoned again with approximately one and a half year. It means that participants stay out of detention 1,5 times longer than non-participants.

[xvii] This coincides with one and a half times the number finding employment within two years.

xviii Taken from an annual report of the ministry of justice and safety (ministerie van justitie en veiligheid, 2016).

xix This coincides with the assumptions in the cost-benefit analyses of reintegration pathways for unemployed people made by Kok, Hollanders en Hop (2006, table 3.1).

xx The amounts are based on the 2015 annual report of the ministry of social affairs and employment (ministerie van sociale zaken en werkgelegenheid, 2016).

xxi Prevention of crime does not always lead to benefits at the macro level. In the case of theft, there is a redistribution of wealth between the victim and the thief.

xxii We assume that the savings depend in a linear way on the duration of detention.
Oei

xxiii This is a discount rate that is commonly used in case of a horizon not longer than 10 years (see Romijn & Renes, 2013).

xxiv In De Koning et al (2016) also present outcomes under the assumption that the benefits are zero for the group that is detained for shorter than two weeks. In that case the benefits per detainee are 1400 euro lower in the intermediate-effect scenario and 2500 euro in the high-effect scenario.

xxv This is lower than the 50 per cent used in De Koning et al (2016). However, a recent study on the work climate in prisons (Gravesteijn et al, 2018), for which groups discussions with PIWs and other prison workers have been held, led to the conclusion that 50 per cent as a maximum is too high. In the present paper we assume that it is 20 per cent.

xxvi We do not have an indication of the housing costs of PIWs.

xxvii See: https://www.dji.nl/Onderwerpen/Volwassenen-in-detentie/Straffen-en-maatregelen/

ANNEX

Table A.1 gives the observations about the monthly status of the former detainees during the first year after prison and the model predictions of these observations.

Tabel A.1 Observations and simulations (% shares)

	Month	1	2	3	4	5	6	7	8	9	10	11	12
Employed													
	Observed	14,2	15,0	15,2	15,3	15,4	15,8	16,0	16,1	16,3	16,4	16,6	16,6
	Simulated	14,2	15,0	15,2	15,3	15,4	15,8	15,8	15,9	16,0	16,3	16,5	16,6
Claiming a benefit													
	Observed	49,4	50,7	51,7	52,1	52,5	52,8	52,6	52,5	52,1	52,0	51,9	51,9
	Simulated	49,4	50,7	51,7	52,1	52,5	52,8	52,6	52,6	52,4	52,2	52,1	51,9
Not employed and not claiming a benefit (including detention)													
	Observed	36,4	34,3	33,1	32,7	32,1	31,4	31,4	31,4	31,6	31,6	31,5	31,5
	Simulated	36,4	34,3	33,1	32,7	32,1	31,4	31,5	31,5	31,6	31,5	31,5	31,5
Total													
	Observed	100	100	100	100	100	100	100	100	100	100	100	100
	Simulated	100	100	100	100	100	100	100	100	100	100	100	100
	Year	1	2										
Recidivism													
	Observed	20,0	31,1										
	Simulated	20,6	29,8										